

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P314496

Luminaire Tested: **24FCZ2-70HE-UNV-L83050-S-CA125-W2A-U-3500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P314496
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-70HE-UNV-L83050-S-CA125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 3500K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6749.0 lumens
Efficiency: N/A
Efficacy: 117.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

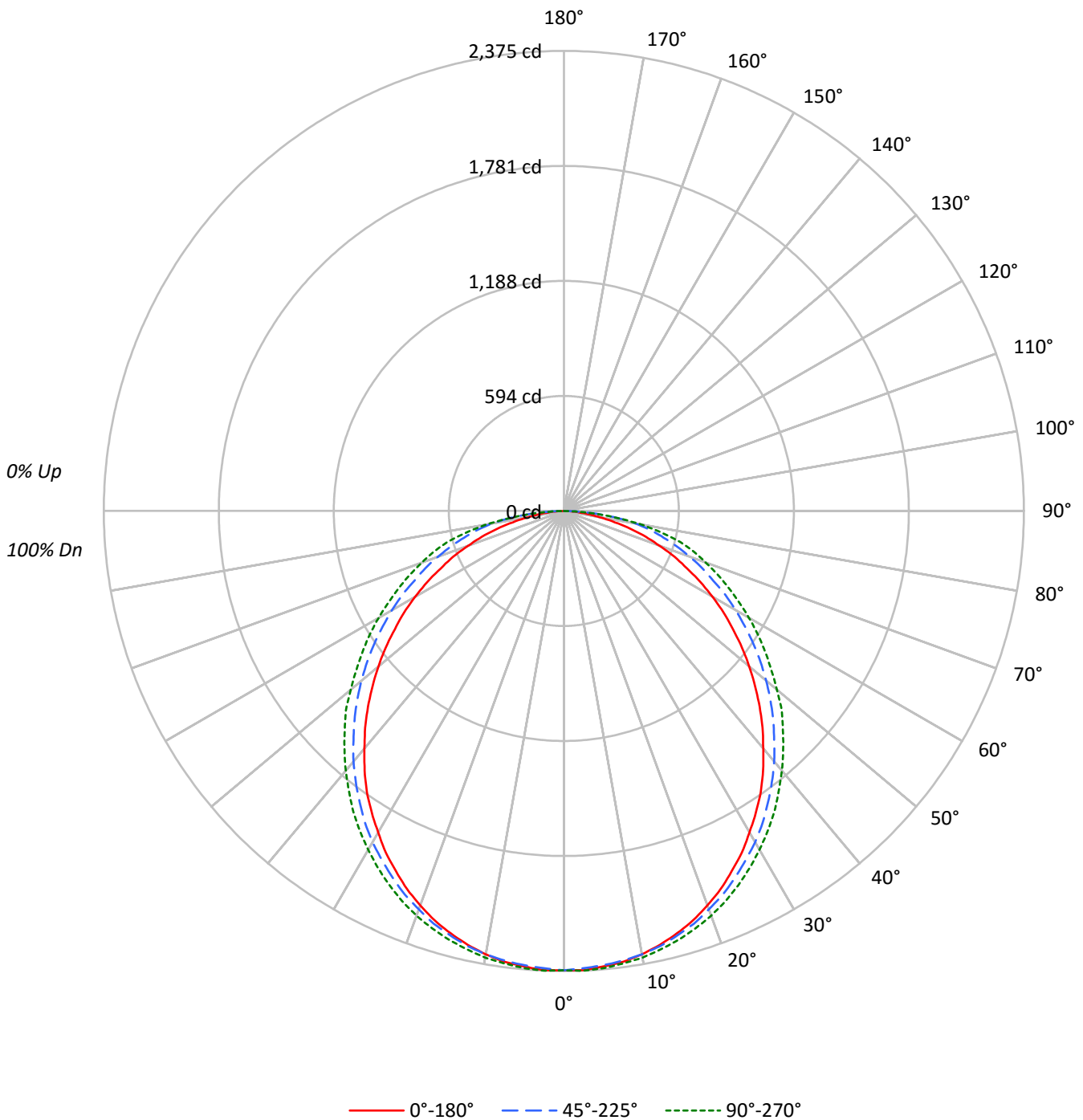
Input Watts (W): 57.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3190	3190	3190
5°	3188	3179	3199
10°	3175	3175	3198
15°	3144	3159	3192
20°	3103	3134	3183
25°	3046	3103	3163
30°	2978	3068	3137
35°	2912	3018	3113
40°	2813	2967	3076
45°	2721	2908	3043
50°	2616	2854	3006
55°	2499	2801	2977
60°	2383	2757	2971
65°	2232	2710	2989
70°	2066	2724	3070
75°	1850	2775	3243
80°	1495	2940	3173
85°	1125	2581	2515



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.5	3.3
10°-20°	641.4	9.5
20°-30°	964.1	14.3
30°-40°	1148.4	17.0
40°-50°	1175.3	17.4
50°-60°	1058.2	15.7
60°-70°	831.0	12.3
70°-80°	539.3	8.0
80°-90°	166.8	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1829.9	27.1
0°-40°	2978.4	44.1
0°-60°	5211.9	77.2
0°-90°	6749.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6749.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2371	2371	2371	2371	2371	
5°	2360	2364	2354	2367	2369	224
15°	2257	2264	2268	2287	2292	636
25°	2052	2069	2090	2124	2131	945
35°	1773	1794	1837	1882	1895	1106
45°	1430	1464	1528	1586	1599	1102
55°	1065	1113	1194	1256	1269	955
65°	701	755	851	922	939	698
75°	356	424	534	607	624	377
85°	73	135	167	163	163	88
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2371.0	2371.0	2371.0	2371.0	2371.0
2.5°	2373.1	2373.1	2362.4	2373.1	2375.3
5°	2360.2	2364.5	2353.8	2366.7	2368.8
7.5°	2347.4	2347.4	2341.0	2353.8	2356.0
10°	2323.8	2325.9	2323.8	2338.8	2341.0
12.5°	2293.8	2298.1	2300.2	2315.2	2317.4
15°	2257.3	2263.8	2268.1	2287.4	2291.6
17.5°	2216.6	2223.1	2233.8	2255.2	2259.5
20°	2167.3	2175.9	2188.8	2216.6	2223.1
22.5°	2113.7	2122.3	2143.7	2169.5	2180.2
25°	2051.6	2068.7	2090.1	2124.4	2130.9
27.5°	1989.4	2004.4	2032.3	2068.7	2077.3
30°	1916.5	1940.1	1974.4	2010.8	2019.4
32.5°	1845.8	1869.3	1910.1	1948.7	1959.4
35°	1772.9	1794.3	1837.2	1882.2	1895.1
37.5°	1689.3	1717.1	1764.3	1809.3	1822.2
40°	1601.4	1635.7	1689.3	1736.4	1751.4
42.5°	1517.8	1554.2	1607.8	1659.2	1676.4
45°	1429.9	1464.2	1528.5	1586.4	1599.2
47.5°	1339.8	1378.4	1447.0	1504.9	1526.3
50°	1249.8	1290.5	1363.4	1423.4	1436.3
52.5°	1159.8	1202.6	1279.8	1344.1	1350.6
55°	1065.4	1112.6	1194.1	1256.2	1269.1
57.5°	979.7	1020.4	1108.3	1172.6	1187.6
60°	885.4	930.4	1024.7	1084.7	1104.0
62.5°	795.3	842.5	941.1	1001.1	1018.3
65°	701.0	754.6	851.1	921.8	939.0
67.5°	619.5	671.0	773.9	842.5	859.6
70°	525.2	583.1	692.4	763.2	780.3
72.5°	443.8	503.8	613.1	681.7	707.4
75°	355.9	424.5	533.8	606.7	623.8
77.5°	270.1	349.4	460.9	516.6	516.6
80°	192.9	276.5	379.4	405.2	409.5
82.5°	126.5	207.9	280.8	278.7	278.7
85°	72.9	135.1	167.2	162.9	162.9
87.5°	27.9	55.7	60.0	60.0	57.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)